

Schedule A

Deficiency Responses for Oroville Facilities Relicensing (FERC Project No. 2100)

1. *We did not find proof of publication of the notice of the filing of the final license application in local newspapers. 18 CFR §4.32(b)(6) requires that you publish notice twice of the filing of the application not later than 14 days after the filing date, in a daily or weekly newspaper of general circulation in each county in which the project is located. Please provide proof of publication or tell us where in the application this documentation can be found.*

DWR Response

DWR published timely notices of its filing of the Oroville Facilities license application in the following three Butte County newspapers:

- The Chico Enterprise-Record,
- The Oroville Mercury-Register, and
- Paradise Post

The documents following this page provide the required proof of publication in the Butte County newspapers.

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA,
IN AND FOR THE COUNTY OF BUTTE

In The Matter Of

LEGAL NOTICE.

NO.

AFFIDAVIT OF PUBLICATION

State of California

ss. }

County of Butte

The undersigned resident of the county of
Butte, State of California, says:

That I am, and at all time herein mentioned n
was a citizen of the United States and not a party
to nor interested in the above entitled matter;
that I am the principal clerk of the printer and
publisher of

**The Chico Enterprise-Record
The Oroville Mercury-Register**

That said newspaper is one of general circula-
tion as defined by Section 6000 Government
Code of the State of California, Case No. 26796
by the Superior Court of the State of California,
in and for the County of Butte; that said newspa-
per at all times herein mentioned was printed
and published daily in the City of Chico and
County of Butte; that the notice of which the
annexed is a true printed copy, was published in
said newspaper on the following days:

FEBRUARY 5, 8, 2005.

Dated May 20, 2005.
at Chico, California.

Loren Neer
(Signature)

LEGAL NOTICE
To Agencies and other
Interested Parties:
On January 28, 2005
the Department of Water
Resources (DWR) filed
an Application for New
License for the Oroville
Facilities (Project 2100,
previously known as the
Feather River Project
and the Oroville Divi-
sion, State Water Facili-
ties) with the Federal
Energy Regulatory
Commission (FERC).
The Oroville Facilities
are located on the
Feather River in Butte
County, California.
Oroville Dam is located
5 miles east of the City
of Oroville and about
180 miles northeast of
San Francisco. The
Oroville Facilities include
the Oroville Dam, Lake
Oroville (a 3.5 -mat
capacity storage reser-
voir), three power plants
(Hyatt Pumping-Gener-
ating Plant, Thermalito
Diversion Dam Power-
plant, and Thermalito
Pumping-Generating
Plant), Thermalito Divi-
sion Dam, the Feather
River Fish Hatchery and
Fish Barrier Dam, Ther-
malito Power Canal, the
Oroville Wildlife Area,
Thermalito Forebay,
Thermalito Forebay
Dam, Thermalito After-
bay, Thermalito Afterbay
Dam, transmission lines,
and a number of recre-
ational facilities.
Construction of the
Oroville Facilities was
authorized by FERC
through issuance of an
initial license on Febru-
ary 11, 1957. This
license expires on Janu-
ary 31, 2007, and DWR
is applying for a new
license covering another
50-year term. The cur-
rent Application contains
results of DWR's com-
prehensive environmen-
tal review and analyses
conducted over the past
five years in preparation
for filing, and presents
DWR's preferred alter-
native for future opera-
tion, including significant
new environmental and
recreation measures.
As a requirement of
FERC's process for relic-
ensing of hydroelectric
power projects, under
Title 18 of the Code of
Federal Regulations,
Chapter 1, Part 4, Sub-
chapter B, §4132, DWR
is hereby providing pub-
lic notification of its fil-
ing. Under those same
provisions, FERC will
subsequently issue a
notice of rendering of
this Application in the
Federal Register. Once
the application is found

acceptable for filing,
FERC will publish an
additional notice solic-
iting public participation.
This Application is avail-
able on DWR's relicens-
ing web site at:
<http://oroville.dwr.ca.gov>. A hard
copy is available for pub-
lic inspection and/or
reproduction during reg-
ular business hours at
the following address:
Department of Water
Resources
1416 9th Street,
Room 1623
Sacramento, CA 95814
Attn: Sue Larsen
Oroville Facilities
Relicensing Program
Telephone: 916-651-8706
For convenience, a copy
of the Application is also
being placed in the
Oroville Branch of the
Butte County Public
Library located at 1820
Mitchell Avenue,
Oroville, California,
95966.
Publish 2/5, 2/8/05



Paradise Post

Declaration of Publication

State of California }
County of Butte }

Declarant Says:

That at all times herein mentioned Declarant is and was a resident of said county of Butte over the age of twenty-one years; not a part to nor interested in the within matter; that Declarant is now and was at all times herein mentioned the Legal Clerk of the Paradise Post, a tri-weekly newspaper, which said newspaper was adjudged a newspaper of general circulation on November 12, 1946, by Superior Court Order No. 22262 as entered in Book 30 Page 223 of said Court; and that said newspaper is printed and published every Tuesday, Thursday and Saturday in Paradise in said County of Butte; and that the

Public Notice

Agencies and other interested Parties
For Oroville Dam

Of which the copy annexed on the margin hereof is a true printed copy, was published in said newspaper in the issues of.

February 5, 8, 2005

and that such publications was made in the regular issues of said paper (and not in any supplemental edition or extra thereof)...

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 8, 2005
Paradise, California.

Declarant

LEGAL NOTICE

To Agencies and Other Interested Parties:

On January 26, 2005 the Department of Water Resources (DWR) filed an Application for New License for its Oroville Facilities (Project 2100, previously known as the Feather River Project and the Oroville Division, State Water Facilities) with the Federal Energy Regulatory Commission (FERC). The Oroville Facilities are located on the Feather River in Butte County, California. Oroville Dam is located 5 miles east of the City of Oroville and about 130 miles northeast of San Francisco. The Oroville Facilities include the Oroville Dam, Lake Oroville (a 3.5-maf capacity storage reservoir), three power plants (Hyatt Pumping-Generating Plant, Thermalito Diversion Dam Powerplant, and Thermalito Pumping-Generating Plant), Thermalito Diversion Dam, the Feather River Fish Hatchery and Fish Barrier Dam, Thermalito Power Canal, the Oroville Wildlife Area, Thermalito Forebay, Thermalito Forebay Dam, Thermalito Afterbay, Thermalito Afterbay Dam, transmission lines, and a number of recreational facilities.

Construction of the Oroville Facilities was authorized by FERC through issuance of an initial license on February 11, 1957. This license expires on January 31, 2007, and DWR is applying for a new license covering another 50-year term. The current Application contains results of DWR's comprehensive environmental review and analyses conducted over the past five years in preparation for filing; and presents DWR's preferred alternative for future operation, including significant new environmental and recreation measures.

As a requirement of FERC's process for relicensing of hydroelectric power projects, under Title 18 of the Code of Federal Regulations, Chapter 1, Part 4, Subchapter B, §4.32, DWR is hereby providing public notification of its filing. Under those same provisions, FERC will subsequently issue a notice of tendering of this Application in the Federal Register. Once the application is found acceptable for filing, FERC will publish an additional notice soliciting public participation.

This Application is available on DWR's relicensing web site at: <http://orovillereicensing.water.ca.gov>
A hard copy is available for public inspection and/or reproduction during regular business hours at the following address:

Department of Water Resources
1416 9th Street, Room 1623
Sacramento, CA 95814
Attn: Sue Larsen
Oroville Facilities Relicensing Program
Telephone: 916-651-8706

For convenience, a copy of the Application is also being placed in the Oroville Branch of the Butte County Public Library located at 1820 Mitchell Avenue, Oroville, California, 95966.

Feb. 5, 8, 2005
070-05

Schedule A

Deficiency Responses for Oroville Facilities Relicensing (FERC Project No. 2100)

2. *In Volume 1, Section 2.0 of Exhibit B of your license application, you describe project operations under various hydrologic conditions. However, you did not describe whether the plant was automatic, manual or some combination thereof, nor did you summarize plant factors for each powerhouse as 18 CFR § 4.51(c)(1) requires.*

DWR Response

Hyatt Pumping-Generating Plant, Thermalito Pumping-Generating Plant, and Thermalito Diversion Dam Powerplant have automatic, semi-automatic and manual control modes for operational control. Normal operation at all plants is fully automatic control supervised by a SCADA system. Load signals are dispatched from the Project Operations Center located in Sacramento and alarms are monitored locally from the Oroville Facilities' Area Control Center adjacent to Hyatt Pumping-Generating Plant.

Energy output meters are not installed at each of the Oroville Facilities power plants. Therefore, a separate plant factor is not measurable for each Oroville Facilities power plant. The energy output of the three Oroville Facilities' plants is metered at the Table Mountain Substation and indicates the sum of the generation output from Hyatt Pumping-Generating, Thermalito Pumping-Generating, and Thermalito Diversion Dam Powerplant.

Consistent with the requirement in 18 CFR § 4.51 (c)(i) to provide an "estimate" of the annual plant factor, a theoretically calculated plant factor can be determined for each Oroville Facilities plant based on CALSIM II modeling results from the Existing Conditions scenario (i.e., 2005 hydrology or 2005 level of development). The model results show Hyatt Pumping-Generating Plant has a plant factor in the range of 39 to 47 percent for below normal and above normal water years. Thermalito Pumping-Generating Plant has a plant factor in the range of 31 to 35 percent for below normal and above normal water years. And Thermalito Diversion Dam Powerplant has a plant factor of approximately 66 percent for below normal and above normal water years. Note that for the model results, there is no "average" water year.

Schedule A

Deficiency Responses for Oroville Facilities Relicensing (FERC Project No. 2100)

3. *In your license application, you do not provide an estimate of the dependable capacity. 18 CFR §4.51 (c) requires that you provide estimates of dependable capacity for both the proposed action and current conditions. You should also provide the critical period associated with the dependable capacity calculation and describe how the dependable capacity was computed.*

DWR Response

The dependable capacity of the Oroville Facilities is considered to be roughly 300 MW for current conditions and the Proposed Action. This figure is derived from recent CAM-CALSIM simulation modeling performed by DWR to support ongoing energy portfolio studies. DWR uses a monthly approach to determine Project Dependable Capacity. This approach is considered to be the most appropriate for the Oroville Facilities where the energy production is heavily constrained by the complex rules for water releases that include flood control, delivery requirements to local Feather Service Area water rights holders, the myriad of environmental protection/mitigation measures, and lastly, SWP exports. As stated in our License Application, the Oroville Facilities produce power incidental to these primary operational considerations. The model determines end-of-month capacity using a 1:20 dry year condition versus a “worst-case” condition, which would be the 1976-77 water year, wherein the output from the Oroville Facilities during the month of August was essentially zero.

The model results indicate that using the above criteria the minimum output from the Oroville Facilities occurs in August, and the generation from the three Oroville power plants during this critical month is as follows: Hyatt Pumping-Generating Plant is 192 MW; Thermalito Pumping-Generating Plant is 111 MW; and Thermalito Diversion Dam Powerplant is 3 MW. The combined modeled dependable output of the three plants totals 306 MW.

Other data such as mean, minimum, and maximum flows, annual and monthly flow duration curves, and area capacity curves required under 18 CFR § 4.51(c)(1) were included in Exhibit B of our License Application. It should be noted that flow duration curves for inflow into Lake Oroville are calculated and are based on time-step Lake Oroville stage data and outflow through Hyatt Pumping-Generating Plant, Spillway, Palermo Outlet, and the River Valve.

Schedule A

Deficiency Responses for Oroville Facilities Relicensing (FERC Project No. 2100)

4. *In Volume 1, Section 3 of Exhibit B, you say the tailwater of the Thermalito Diversion Dam powerplant is fixed by the elevation of the Fish Barrier Dam; however Exhibit B does not give that elevation. Also, we would expect the tailwater created by the Fish Barrier Dam to vary with the flow over the crest of the dam. For the Hyatt Pumping-Generating Plant, you explain that the tailwater is independent of flow up to 16,900 cfs (controlled maximum flow from the Thermalito Diversion Dam powerhouse); however, at flows higher than 16,900 cfs, we would expect the Thermalito Diversion Dam to surcharge. 18 CFR §4.51 (c) requires that you provide tailwater rating curves for the project. Therefore, please provide a tailwater rating curve for the Thermalito Diversion Dam powerplant and at the Hyatt Pumping-Generating plant over the full range of outflows.*

DWR Response

The weir elevation information is shown on the design drawing Exhibit F-17 included in our License Application. The weir crest of the Fish Barrier Dam is at elevation 148.5 ft. The actual tailwater elevation is a function of flow over the weir. For example, at 520 cfs, the elevation of the Diversion Pool is 0.75 ft. above the weir crest or elevation 149.25 ft.

In Volume II, Exhibit F of the License Application, Exhibits F-14 and F-29 show the arrangement of the Thermalito Diversion Dam Powerplant tailrace. The tailwater at Thermalito Diversion Dam Powerplant is located in the Feather River at the upper end of the Fish Barrier Pool at elevation of approximately 150.0 ft. With a discharge of 615 cfs from Thermalito Diversion Dam Powerplant, Feather River levels are not influenced by Thermalito Diversion Dam Powerplant discharge. However, Feather River levels are influenced by spill over Thermalito Diversion Dam and the Fish Barrier Pool downstream. At zero discharge over Thermalito Diversion Dam Spillway, the Feather River level remains generally at elevation 150.0 ft. The Spillway Rating Curve for Thermalito Diversion Dam is shown in Volume 2, Section 2.1.2 of Exhibit F in Figure F.2.1-2.

In Volume II, Exhibit F of the License Application, Exhibits F-1, F-4, and F-5 show the arrangement of Hyatt Pumping-Generating Plant tailrace. As indicated in Exhibit F-5, Units 1 and 2 discharge into Diversion Tunnel No. 2, and the outlet is on the Feather River at approximately elevation 205.0 ft. Units 3 through 6 discharge into Diversion Tunnel No. 1. The outlet for Diversion Tunnel No. 1 is located on the Feather River at approximately elevation 180.0 ft. The outlets for both diversion tunnels are located in the reservoir for the Thermalito Diversion Pool. As indicated in Volume I, Exhibit B, Section 3.4.1, water surface levels in the Diversion Pool vary over a narrow range, between elevation 221.0 minimum to elevation 225.0 maximum, and the water surface

Attachment 1

Schedule A

Deficiency Responses for Oroville Facilities Relicensing (FERC Project No. 2100)

level is maintained in that range independent of discharge from Hyatt Pumping-Generating Plant. Therefore, there is no tailwater rating curve based on discharge from Hyatt Pumping-Generating Plant.

Schedule A

Deficiency Responses for Oroville Facilities Relicensing (FERC Project No. 2100)

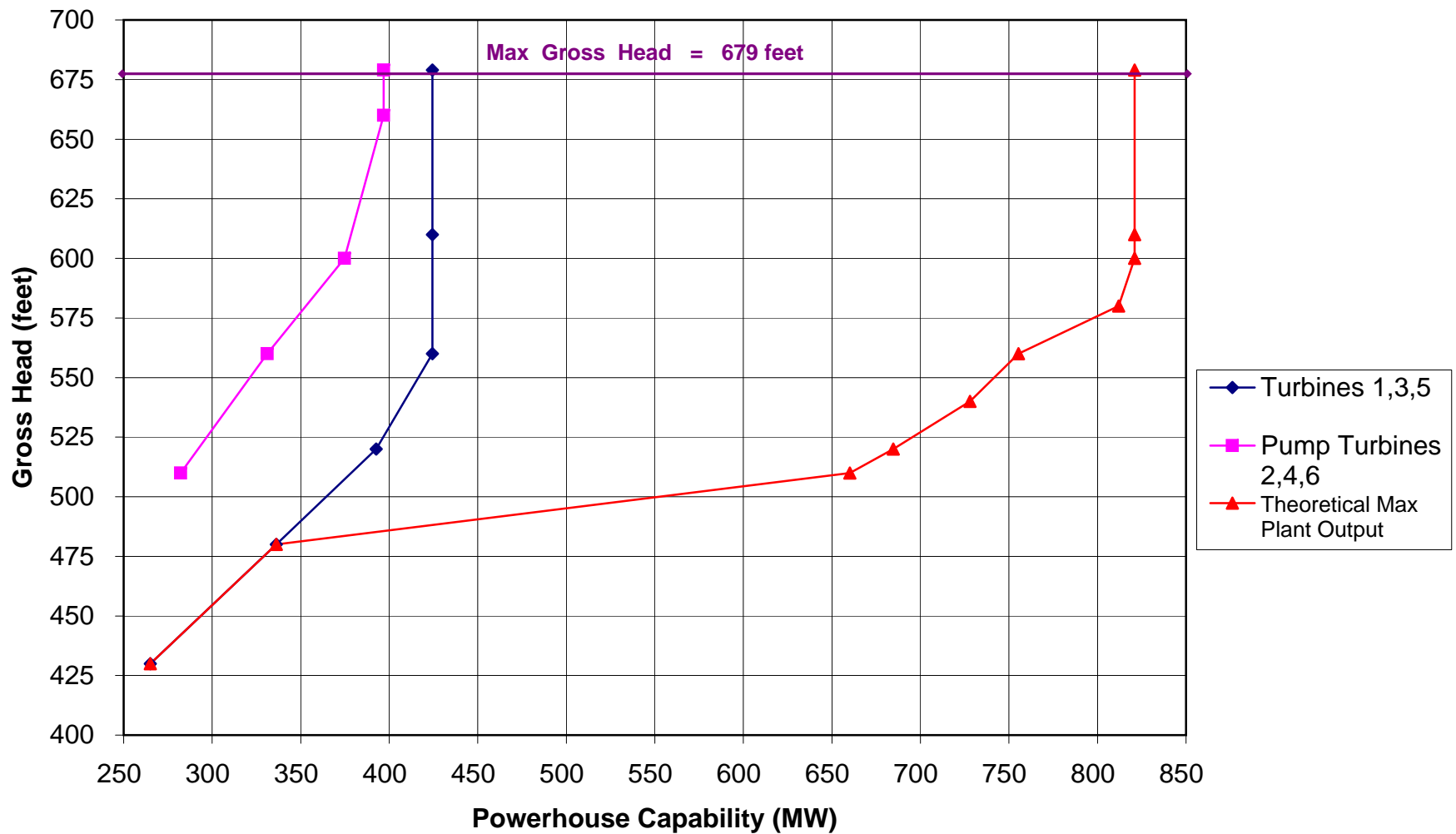
5. *18 CFR §4.51 (c) requires curves showing powerplant capability versus head and requires you to specify maximum, normal and minimum head. In Volume 1, Section 3 of Exhibit B, you provide a table showing the capacity at maximum, normal, and minimum head; however no curves were provided to show how the powerplant capability varies with head. Therefore, please provide such curves for each of the three power plants.*

DWR Response

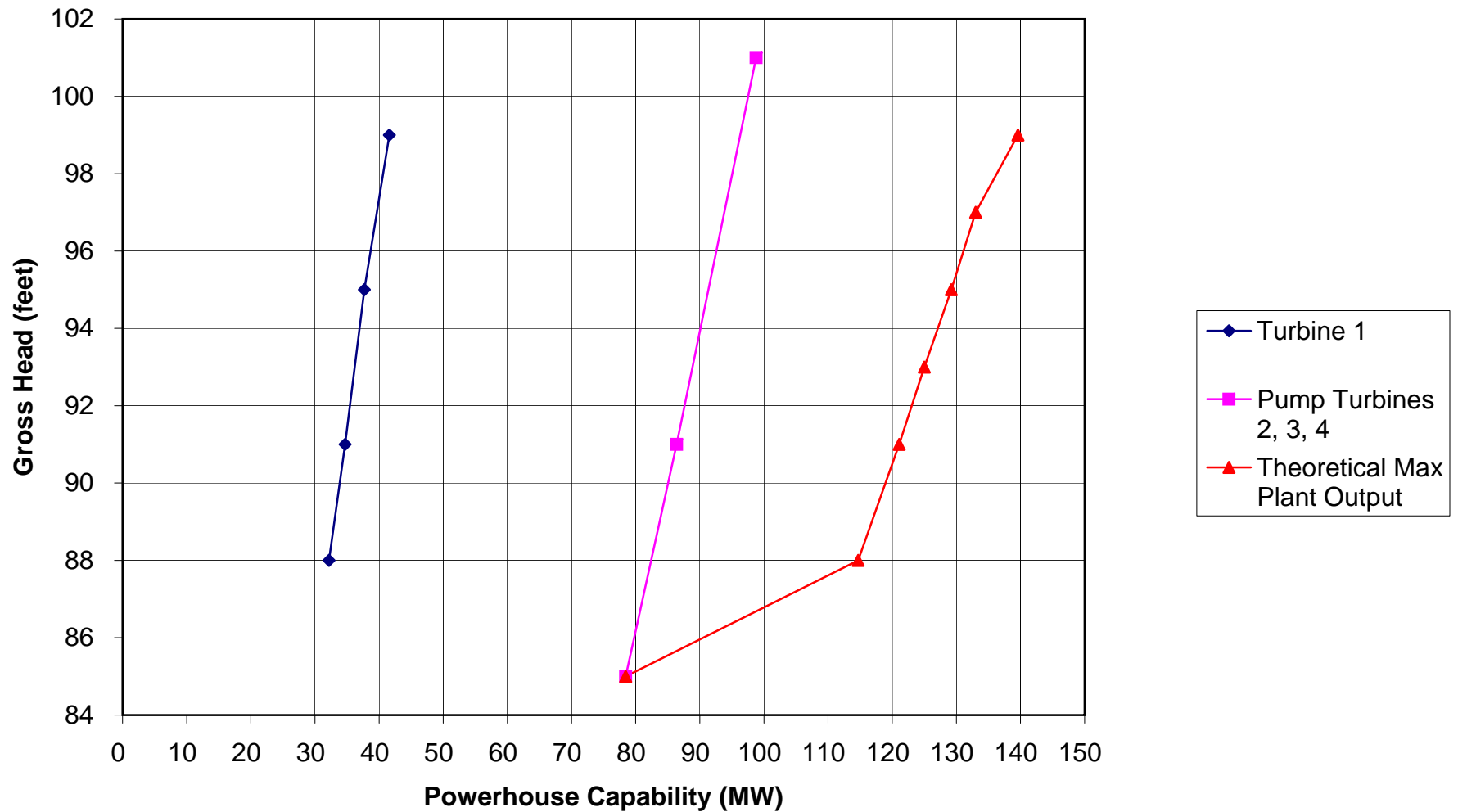
Exhibit B of our License Application contains Table B.3.5-1 to provide information on the upper and lower bounds of output for each of the three Oroville Facilities' power plants. Individual plant performance curves were not available at the time of our filing. These curves have now been developed in response to your request. For the Hyatt Pumping-Generating Plant, the output curves reflect the turbine/generator performance test results from the efficiency testing conducted during 2004 subsequent to completion of turbine refurbishment work.

The power plant capability versus head curves are provided on the following pages.

Hyatt Pumping-Generating Plant Capability as a Function of Head at Maximum Discharge



Thermalito Pumping-Generating Plant Capability as a Function of Head at Maximum Discharge



Thermalito Diversion Dam Power Plant Capability as a Function of Head at Maximum Discharge

